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ABSTRACT

After a 1977 survey reflected the importance of graphics education for news students, a study was developed to investigate the state of graphics education in the whole field of journalism. A questionnaire was sent to professors and administrators in four print-oriented professional fields of education: magazine, advertising, public relations, and photojournalism. Respondents were asked to rate a list of 16 items taught in graphics courses on two dimensions: the importance of the items to students in a particular professional area and the preparation on that item provided for students by the respondent's program. The survey separated the educational experience into two basic types of knowledge (cognitive and skills) and two different graphics areas (design and production). (A survey analysis and tables indicating a mean rating, skill importance, and the preparation offered in educational programs are included for news and the four professional fields in the study; a separate figure conveys the combined responses of administrators and graphics instructors for all of the areas and dimensions of the study.) (MAI)

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GRAPHICS EDUCATION SURVEY

PART II

by

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Graphics Division
Association for Education in Journalism

Seattle, Washington
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CS204290

GRAPHICS EDUCATION SURVEY: PART II

In the spring of 1977 a survey was sent to the Graphics Division members of the Association for Education in Journalism and to deans and department heads listed in the directory published by Editor and Publisher. The results of that survey were reported at the 1977 AEJ Conference in Madison, Wisconsin.

One of the findings was that the graphics instructors and journalism administrators felt there was a need for graphics education for news students. They didn't indicate a similar need for students in magazine, public relations, advertising, and photojournalism. This finding elicited some surprise from educators who teach in these other professional areas, particularly magazine. It was suggested at the conference by the author of the report that perhaps administrators and graphics professors were most familiar with news and therefore better able to project graphics need for students in that area. While the original study assumed that the administrators and graphics teachers would be able to provide a reliable view of graphics needs for the various types of students in journalism, in fact that assumption may not be true.

For that reason a second study was undertaken in the late fall of 1977. This time the same set of questions was sent to members of the other four printed-oriented professional divisions of AEJ--magazine, advertising, public relations and photojournalism. News was not included since the previous study had already found a need for graphics education for news students. (If this study had been funded, the news division, which is a very large group, would have been included also in the second series of surveys.)

Research Questions. The research questions for the second series of surveys are essentially the same as the first. The surveys investigate the state of graphics education in the broad field of journalism. It looks at both graphic design and graphic production topics. It asked journalism educators how important the study of graphics is or should be to journalism students in various professional areas. Do they have different needs relating to their area of specialization? It also asks the educators to evaluate the success of their own curriculum in providing interested students with various types of graphics education experiences. The survey separates the educational experiences into two basic types of knowledge, cognitive and skills, and into two different graphics areas, design and production, to see if there is any difference in their relative importance and in their teaching practices.

In addition, this second survey also sought to identify areas of disagreement, if any, between the administrators, graphics professors, and professional area professors.

Assumptions. This study assumes that educators can identify the graphics needs of their students and that the needs are fairly universal across areas of specialization. But obviously there is a range of needs within any one professional area. For example, news students who will work on a weekly and do everything from advertising to pasteup may have different graphics needs than the news student who reports for a major metropolitan newspaper and types and edits stories on a video display terminal.

In spite of this diversity, most journalism programs assume their news students, and students in other professional areas as well, can be served by a basic core curriculum. This curriculum decision assumes that a certain amount of knowledge and professional skill is needed universally regardless of the ultimate career objective. This decision may also recognize the fact that many students don't have a specific career objective and that there may be a lot of movement from one area to another after graduation. These students, in other words, should be educated for all eventualities.

This range of specialization exists within any professional area in journalism and is a major problem for curriculum planning. Decisions are made, nevertheless, and that's what this survey asks of the educator respondents. Recognizing that student needs will vary with specialization, the educators were asked to project a certain level of knowledge or accomplishment needed in the area of graphics.

RESEARCH METHODOLOGY

The same set of questions was used for both Part I and Part II of this study. So this section on methodology will describe the procedures used for both studies.

Respondents. In the first study a total of 140 names was on the graphics division mailing list. Of that number, 44 replied for a response rate of 31%. The list of administrators from Editor and Publisher included 219 names of which 154 responses were received for a response rate of 70%. The total mailing for Part I was 359 with a response of 198 for a rate overall of 55%.

While 154 responses were received from the mailing to administrators, it was noted in coding that many of the respondents were not, in fact, administrators. This may have happened because the administrators turned the questionnaire over to someone else on the faculty who was more familiar with the subject or who was in charge of some kind of curriculum planning responsibility.

This information was obtained from a question at the end of the survey that specifically asked for their job title. Of the 154 respondents, 68 actually carried an administrative title.

In Part II of the study, the Advertising Division contained 121 names of which 44 responded for a response rate of 36%. Magazine Division has 144 members of which 47 responded for a rate of 33%. The Public Relations Division list contained 152 names of which 69 responded for a rate of 45%. The Photojournalism Division has 84 members of which 38 responded for a 45% response rate. A total of 501 surveys were sent to members of these professional divisions with a response of 198 for a total response rate of 40%.

The Survey Instrument. The basic questionnaire contained a list of 16 items which are occasionally taught in graphics courses. The respondents were asked to rate the items on two dimensions: the importance of the item to students in a particular professional area and the preparation provided by the respondent's program for those students on that item.

The 5-point rating scale used for the two dimensions of importance and preparation is given below:

IMPORTANCE		PREPARATION
Of no importance	1	Unprepared
Of little importance	2	Slightly prepared
Moderately important	3	Moderately prepared
Very important	4	Well prepared
Crucial	5	Professionally competent

The 16 items were divided into two basic types of knowledge based on the "knowing how" and "knowing that" theories in the literature of education and semiotics. In this study the two categories are labeled Skills and Cognitive Knowledge. The first 11 items on the questionnaire were the skills items and the last five were in the cognitive area. They are as follows:

Skills Dimension

Specifying type styles and sizes
Handsetting display transfer type
Letterspacing display type
Photoscaling and cropping
Rough dummying a layout
Preparing comprehensives for presentation
Preparing camera-ready paste-ups
Specifying photomechanicals
Determining page impositions
Drawing up bid specifications
Preparing a simple second-color overlay

Cognitive Knowledge

Knowledge about basic design principles
Knowledge about composition of type
Knowledge about printing processes
Knowledge about paper and binding methods
Knowledge about computers and new technology

One other type of comparison is possible using these same sixteen items. One of the research questions dealt with the relative importance of design as opposed to the mechanics of production. In the list of skills, six were identified as being predominately a design function and five as production oriented. In the cognitive area, one item was obviously design oriented and the other four were production topics. These items are as follows:

Production Design Topics

Specifying type style and sizes
Letterspacing display type
Photo scaling and cropping
Rough dummying a layout
Specifying photomechanicals
Preparing comprehensives for presentation
Knowledge about basic design principles

Production Mechanics Topics

Handsetting display transfer type
Preparing camera-ready paste-ups
Determining page impositions
Drawing up bid specifications
Preparing a simple second-color overlay

Knowledge about composition
Knowledge about printing processes
Knowledge about paper and binding methods
Knowledge about computers and new technology

Procedures. In Part II of the study each educator in a specific professional area received the one-page questionnaire with these 16 items. The administrators and graphics teachers surveyed in Part I received five versions of this basic questionnaire. In their packet of surveys each page carried a heading indicating it was to be answered for students with an interest in the professional area specified.

In both Part I and Part II some of the items were modified slightly to make them directly relevant to the area. For example, the "dummying" item specified rough dummying a magazine layout, advertising, layout, promotional brochure, photo page, or newspaper page.

FINDINGS

The results of this study will be presented by professional areas. Within each area the item means will be given and displayed in a chart which visually compares the difference between the dimensions. T-tests will be used to compare the difference between the means of the dimensions. The items will then be displayed again in a chart to visually compare the difference in the responses of the administrators and professors. Following the area-by-area analysis of the data, an overall tabulation will be presented which will permit comparison across professional areas.

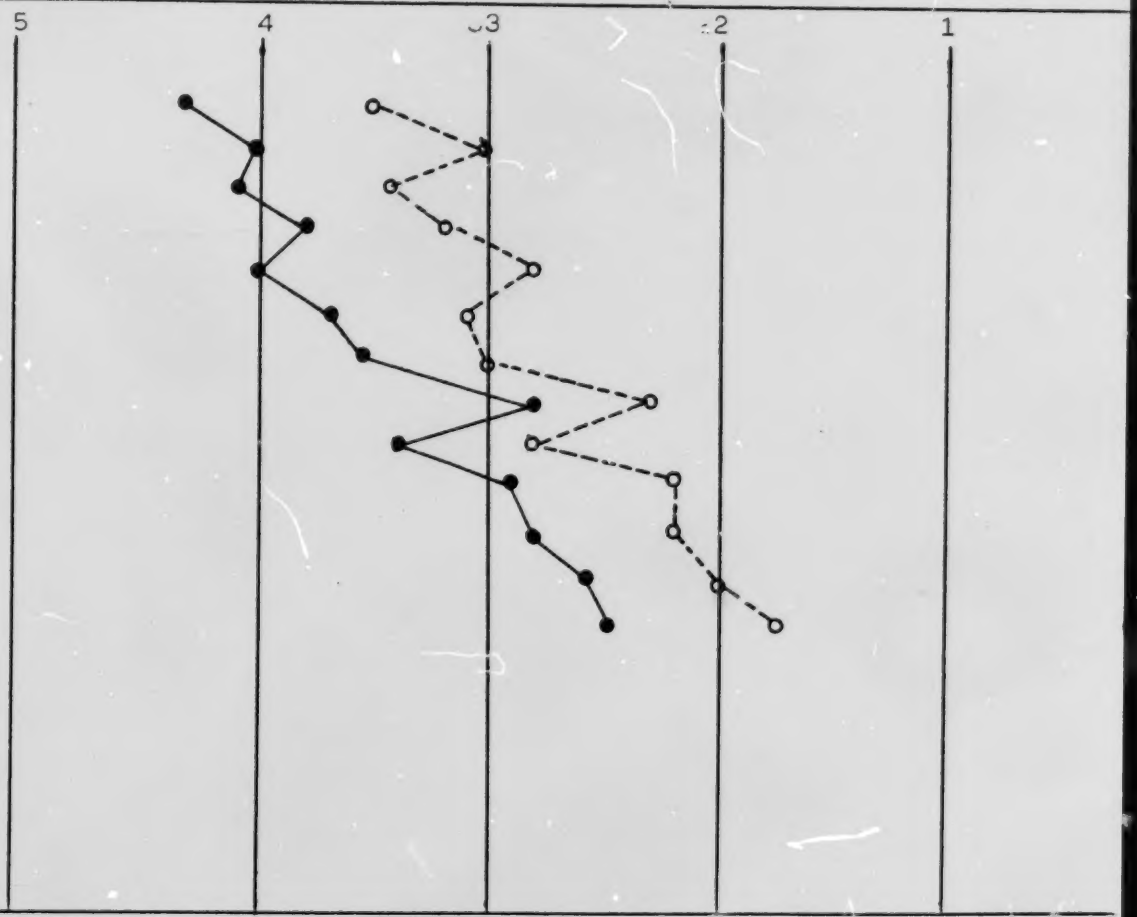
NEWSPAPER STUDENTS

The mean ratings presented in this section represent all of the responses from Part I of the survey. In other words the mean comprises the combined ratings of all 198 respondents--graphics educators, administrators, and their delegated respondents. Figure 1 gives the mean ratings for the items ranked in order of importance.

Importance	ITEM	Preparation
4.3	Dummying	3.5
4.1	Cropping, Scaling	3.4
4.0	Design Principles	3.0
4.0	New Technology	2.8
3.8	Printing Processes	3.2
3.7	Specifying Type	3.1
3.6	Composition	3.0
3.4	Camera-ready Pasteup	2.8
2.9	Photomechanicals	2.2
2.8	Paper and Binding	2.2
2.8	Comprehensives	2.3
2.6	Page Imposition	2.0
2.5	2nd Color Overlay	1.7
2.2	Bid Specifications	1.6
2.2	Letterspacing	1.9
2.1	Handsetting type	1.9

Fig. 1: Mean ratings for newspaper

Mean Ratings 1*	2	
4.3	3.5	Dummying
4.0	3.0	Design Principles
4.1	3.4	Photo Cropping, Scaling
3.8	3.2	Printing Processes
4.0	2.8	New Technology
3.7	3.1	Specifying Type
3.6	3.0	Composition
2.8	2.3	Comprehensives
3.4	2.8	Camera-ready Pasteups
2.9	2.2	Photomechanicals
2.8	2.2	Paper and Binding
2.6	2.0	Page Imposition
2.5	1.7	Second Color Overlay
		Below 2.5 Mean:
		Setting Display Transfer
		Letterspacing
		Bid Specifications



*1 Importance
2 Preparation

Fig. 2: Comparison of importance and preparation dimension for news students

Comparison of Dimensions. Figure 2 displays the ratings for those items with a 2.5 rating or higher. The cognitive scores are grouped first, then the skills scores. Within both these categories are the design topics which are indicated by capital letters and the production items which are upper and lower case. The mean ratings for the importance dimension are given in the solid line and the preparation dimension ratings are indicated by a dotted line.

Most of the items are clearly seen as being of some importance. Four of them--dummying, cropping and scaling, design principles, and new technology--were rated as crucial. Letterspacing, handsetting, and bid specifications are the only items which are not at least moderatly important. Of those items, then, which are seen as being of at least moderate importance, preparation lags behind importance in all cases.

Students are seen as being very prepared in three of the areas--dummying, cropping and scaling, and design principles--while students are seen as having little or no preparation in the topics of second color overlays, bid specifications, letterspacing, and handsetting type.

To compare the various dimensions of design and production, and cognitive knowledge and skills, the means were computed for those groupings of items.

	IMPORTANCE	PREPARATION
Design	3.4	2.8
Production	3.0	2.4
Cognitive	3.6	2.8
Skills	3.0	2.4

Fig. 3: Means for news students on the various dimensions

T-tests of the various comparisons indicate a number of differences significant at the .05 level. Comparing the importance with the preparation, it seems there is a significant difference for all four groups of items. In other words, the preparation significantly lags behind the importance in all areas.

IMPORTANCE:	PREPARATION
Design	5.38*
Production	5.92*
Cognitive	6.89*
Skills	4.66*

* Significant at .05

Fig. 4: T values for comparison of importance and preparation

When cognitive is compared with skills and production with design: all but one of the comparisons is significant at .05. There seems to be no significant difference between cognitive and skills in the level of preparation.

	COGNITIVE : SKILLS
Importance	6.03*
Preparation	2.05
	DESIGN : PRODUCTION
Importance	5.04*
Preparation	4.70*

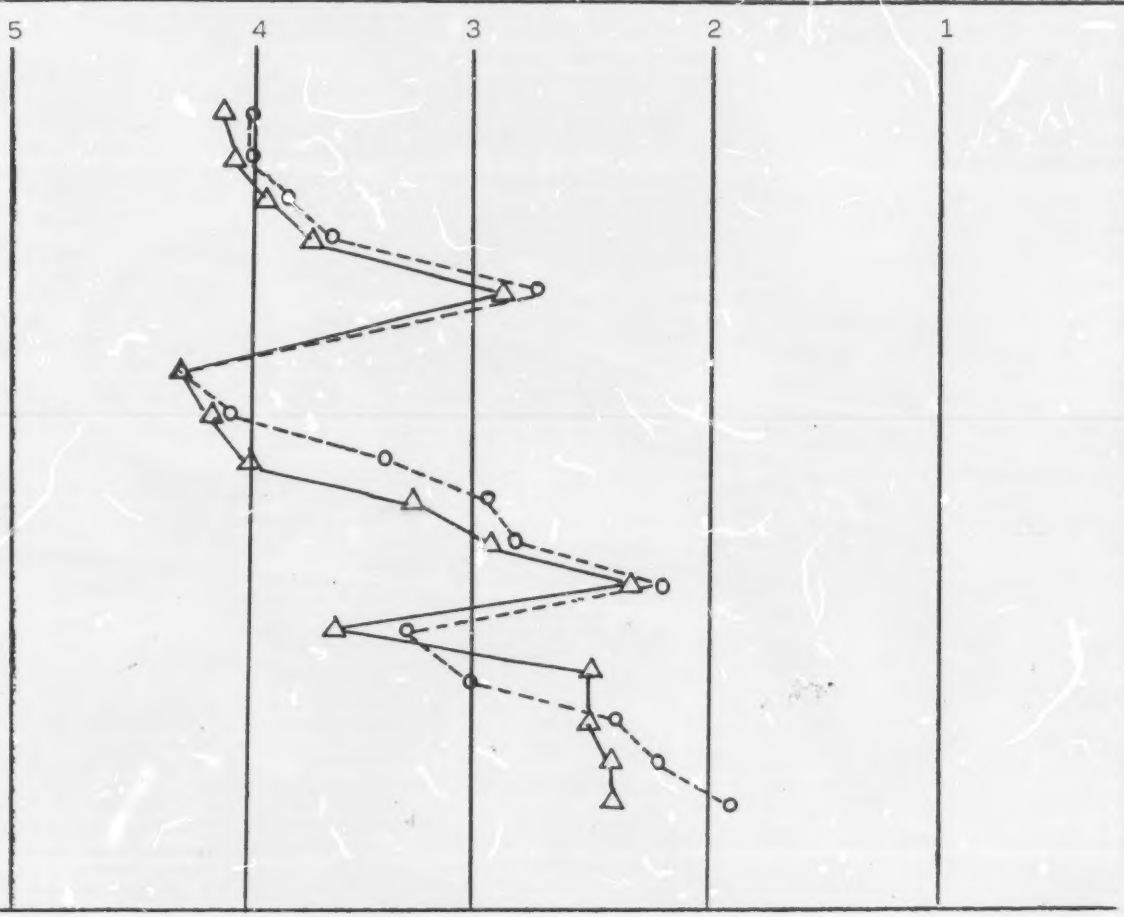
* significant at .05

Figure 5: T values for comparison of cognitive with skills and design with production

Comparison of Educators. Figures 6 and 7 present the mean ratings for the administrators and graphics professors. The solid line with circles plots the total responses from the first part of the study. The line represents all 198 respondents--both graphics professors and administrators. The dotted line represents the 68 administrators and the solid line with dots represents the 44 graphics professors. Figure 6 is the profile for importance of graphics for newspaper students. Figure 7 profiles the level of preparation these students receive at present.

NEWS: IMPORTANCE

Mean Ratings 1	2	
		Cognitive:
4.2	4.6	DESIGN PRINCIPLES**
4.1	4.0	New Technology
3.9	3.8	Printing Processes
3.7	3.6	Composition
2.9	2.7	Paper, Binding
		Skills:
4.3	4.3	DUMMYING
4.2	4.1	SCALING, CROPPING
4.0	3.4	SPECIFYING TYPE
3.3	2.9	SPECIFYING PHOTOMECHANICS
2.9	2.8	PREPARING COMPS
2.3	2.1	LETTERSPACING
3.6	3.3	Camera-ready Pasteup
2.5	3.0	Page Imposition
2.5	2.4	Second Color Overlay
2.4	2.2	Bid Specifications
2.4	1.9	Handsetting Display



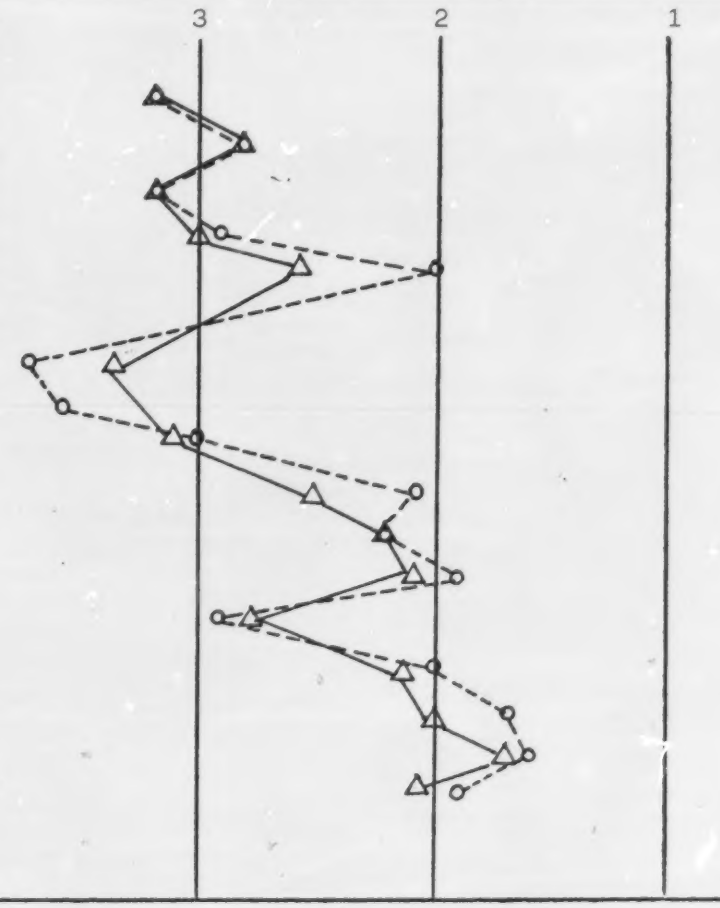
. Graphics Professors
. Administrators

** Design topics in capitals; Production topics in lower case

Fig. 6: Comparison of educators' views of the graphics needs of news students

NEWS: PREPARATION

Mean Ratings 1	Mean Ratings 2		Crucial 5 / Very 4 / Moderately 3 / Little 2 / No 1
		Cognitive:	
3.2	3.2	DESIGN PRINCIPLES**	
2.8	2.8	New Technology	
3.2	3.2	Printing Processes	
2.9	3.0	Composition	
2.6	2.0	Paper, Binding	
		Skills:	
3.4	3.8	DUMMYING	
3.4	3.6	SCALING, CROPPING	
3.2	3.0	SPECIFYING TYPE	
2.6	2.1	SPECIFYING PHOTOMECHANICS	
2.3	2.3	PREPARING COMPS	
2.1	1.9	LETTERSPACING	
2.8	2.9	Camera-ready Pasteup	
2.2	2.0	Page Imposition	
2.0	1.7	Second Color Overlay	
1.7	1.6	Bid Specifications	
2.1	1.9	Handsetting Display	



. . Graphics Professors
. Administrators

** Design topics in capitals; Production topics in lower case

Fig. 7: Comparison of educators' views of the graphics preparation of news students

The means for the various dimensions are given below:

	IMPORTANCE	PREPARATION
Administrators:		
Cognitive	3.59	2.84
Skills	3.05	2.61
Design	3.36	2.84
Production	2.92	2.35
Graphics Professors:		
Cognitive	3.77	3.03
Skills	3.34	2.73
Design	3.63	2.99
Production	3.19	2.54

Fig. 8: Educator means for newspaper dimensions

In general the graphics professors rate the dimensions slightly higher than the administrators. Both groups rate cognitive higher than skills, design higher than production, and importance higher than preparation.

T tests were conducted to see if there was any difference in the views of graphics professors and administrators on the various dimensions. There seemed to be general agreement between the administrators and graphics professors on the eight comparisons. Only two were found to be significantly different. They are: the importance of skills and the importance of design. The two groups otherwise seem to agree on the rating of all preparation topics, both cognitive areas, and both production areas.

ADMINISTRATORS : GRAPHICS PROFESSORS	
Skills Importance	3.09*
Skills Preparation	1.04
Cognitive Importance	1.56
Cognitive Preparation	1.41
Design Importance	2.65*
Design Preparation	1.21
Production Importance	2.61
Production Preparation	1.64

* Significant at .05

Fig. 9: T values for comparison of administrators and graphics professors

ADVERTISING STUDENTS

The mean ratings presented in Figure 10 are the ratings from Part II of the study. They represent the views of the 44 educators in the professional area of advertising. The ratings are arrayed in order of their importance according to the respondents.

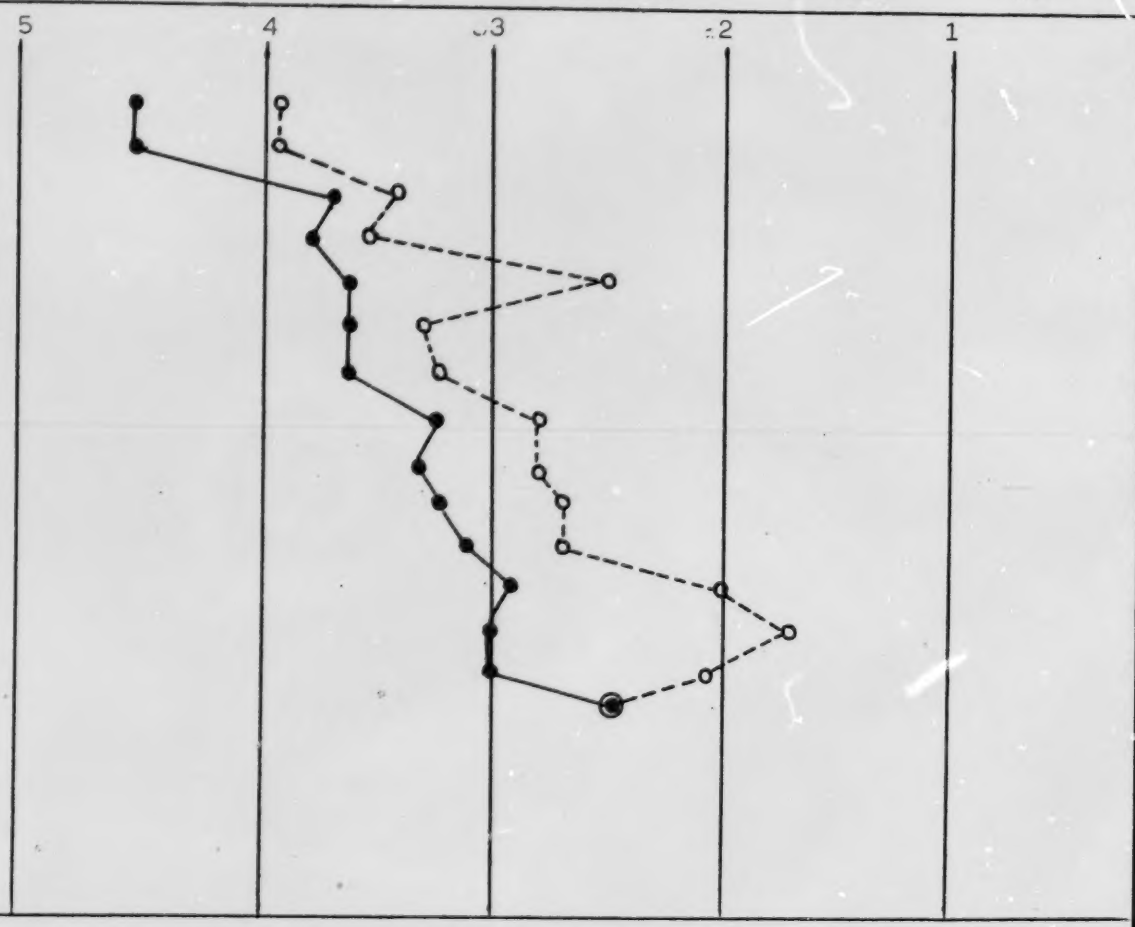
Importance	ITEM	Preparation
4.5	Dummying	3.9
4.5	Design Principles	3.9
3.8	Printing Processes	3.5
3.7	Photo scaling, cropping	3.4
3.6	Specifying type	3.3
3.6	Composition	3.2
3.6	New technology	2.5
3.3	Camera-ready pasteups	2.8
3.2	Photomechanicals	2.7
3.2	Comprehensives	2.8
3.1	Paper and Binding	2.7
3.0	Bid specifications	2.1
3.0	Second color overlay	2.4
2.9	Page Imposition	2.4
2.5	Letterspacing	2.5
2.3	Handsetting type	2.4

Fig. 10: Mean ratings for advertising

For advertising students their professors see two of the graphics topics as crucial. Only one is below the level of moderately important. A comparison of the relative position of the importance and preparation arrays indicates that new technology is rated higher relative to importance than it is to preparation. This suggests that less time may be being spent on this topic than it deserves in the views of the advertising educators. There are several other items with some minor switched positions, but new technology is the only one with a major disagreement in order. Students were rated as very prepared on six of the items and moderately prepared on the remaining items.

ADVERTISING

Mean Ratings 1*	2	
4.3	3.9	Dummying
4.5	3.9	Design Principles
3.7	3.4	Photo Cropping, Scaling
3.8	3.5	Printing Processes
3.6	2.5	New Technology
3.6	3.3	Specifying Type
3.6	3.2	Composition
3.2	2.8	Comprehensives
3.3	2.8	Camera-ready Pasteups
3.2	2.7	Photomechanicals
3.1	2.7	Paper and Binding
2.9	2.0	Page Imposition
3.0	1.7	Second Color Overlay
3.0	2.1	Bid Specifications
2.5	2.5	Letterspacing
Below 2.5 Mean:		
		Setting Display Transfer



*1 Importance

2 Preparation

Fig. 11:Comparison of importance and preparation dimensions for advertising students

Comparison of Dimensions. Figure 11 displays the ratings for those items that are seen to be at least 2.5 or higher in importance. As mentioned, only one, handsetting type, is below this point. In general the two profiles for importance and preparation seem to be closer for advertising than for the newspaper students. One item, letterspacing, has the same rating for both importance and preparation. Major divergence between importance and preparation is apparent for the items of second color overlays and new technology.

A comparison of the means for the various groupings of scores indicates that across all comparisons importance is higher than preparation. The design means are higher than the production means, and the cognitive means are higher than the skills means. These patterns are the same for advertising as they were for newspaper.

	IMPORTANCE	PREPARATION
Design	3.58	3.21
Production	3.15	2.65
Skills	3.09	1.95
Cognitive	3.58	3.15

Fig. 12: Advertising means for dimensions

T tests of the various comparisons indicate all the comparisons are signigicant at .05. Importance is significantly higher than preparation; design is significantly higher than production; and cognitive is significantly higher than skills.

IMPORTANCE :	PREPARATION
Design	2.93*
Production	3.58*
Cognitive	3.09*
Skills	5.99*
COGNITIVE :	**SKILLS**
Importance	3.78*
Preparation	6.10*
DESIGN :	**PRODUCTION**
Importance	3.34*
Preparation	4.33*

* Significant at .05

Fig. 13: T values for comparisons of three dimensions

Comparison of Educators. Figures 14 and 15 represent the mean ratings for the administrators, graphics professors, and advertising professors. Figure 14 profiles their various views of the importance of all the items and Figure 15 is the profile for the views on the preparation dimension.

In general the administrators and graphics professors are closer in their views of importance while the advertising professors seem to be at a distance from the other two. The graphics professors do agree more with the advertising professor on three items: letterspacing, camera-ready pasteups, and handsetting type. The graphics professors share an identical view with the administrators on the topic of preparing comprehensives. Vast disagreement is apparent for the topic of design principles with the advertising professors rating considerably higher than either the graphics professors or administrators.

It's clear from the chart that the advertising professors rate all of the graphics items considerably higher than either the graphics professors or the administrators. The graphics professors are next in terms of high ratings, and the group with the lowest ratings consistently is the administrators.

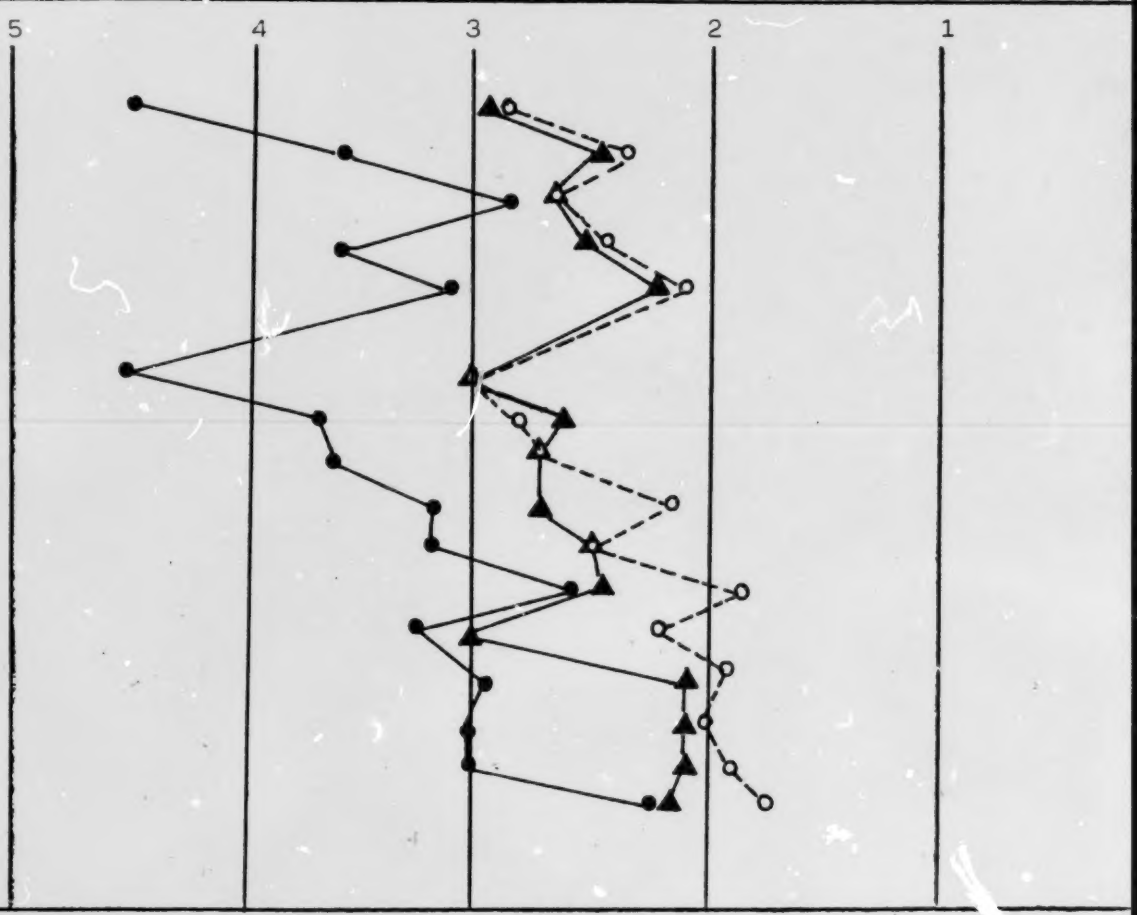
In the area of preparation the graphics professors and administrators were even closer together while the distance between them and the advertising professors was even more obvious. The graphics professors diverged from the administrators on only one topic: design principles. On that topic the graphics and advertising professors were closer. The same general patterns hold with the advertising professors rating the preparation of their students higher than either the graphics professors or administrators. The administrators and graphics professors exchanged places on four topics although the administrators were not much higher on any of the four. Second color overlays is the one topic where there is some obvious disagreement between the graphics professors and administrators with the administrators rating the topic higher in preparation. The other three areas rated higher by the administrators than the graphics professors were camera-ready pasteups, handsetting type, and composition.

T tests were conducted to see if there was any significant difference between the views of the advertising professors and the administrators. The results are given in Figure 16.

[1]A separate set of T tests could also be run comparing the graphics and advertising professors but since the newspaper tests indicated agreement between the graphics professor and administrators, it was decided not to complicate the study further with this additional set of tests.

ADVERTISING: IMPORTANCE

Mean Ratings 1*	2	3	
			Cognitive:
4.5	2.9	2.8	DESIGN PRINCIPLES**
3.6	2.4	2.3	New Technology
2.8	2.6	2.6	Printing Processes
3.6	2.5	2.4	Composition
3.1	2.2	2.1	Paper, Binding
			Skills:
4.5	3.0	3.0	DUMMYING
3.7	2.6	2.8	SCALING, CROPPING
3.6	2.7	2.7	SPECIFYING TYPE
3.2	2.7	2.2	SPECIFYING PHOTOMECHANICS
3.2	2.5	2.5	PREPARING COMPS
2.5	2.4	1.8	LETTERSPACING
3.3	3.0	2.3	Camera-ready Pasteup
2.9	2.1	1.9	Page Imposition
3.0	2.1	2.0	Second Color Overlay
3.0	2.1	1.9	Bid Specifications
2.3	2.2	1.7	Handsetting Display



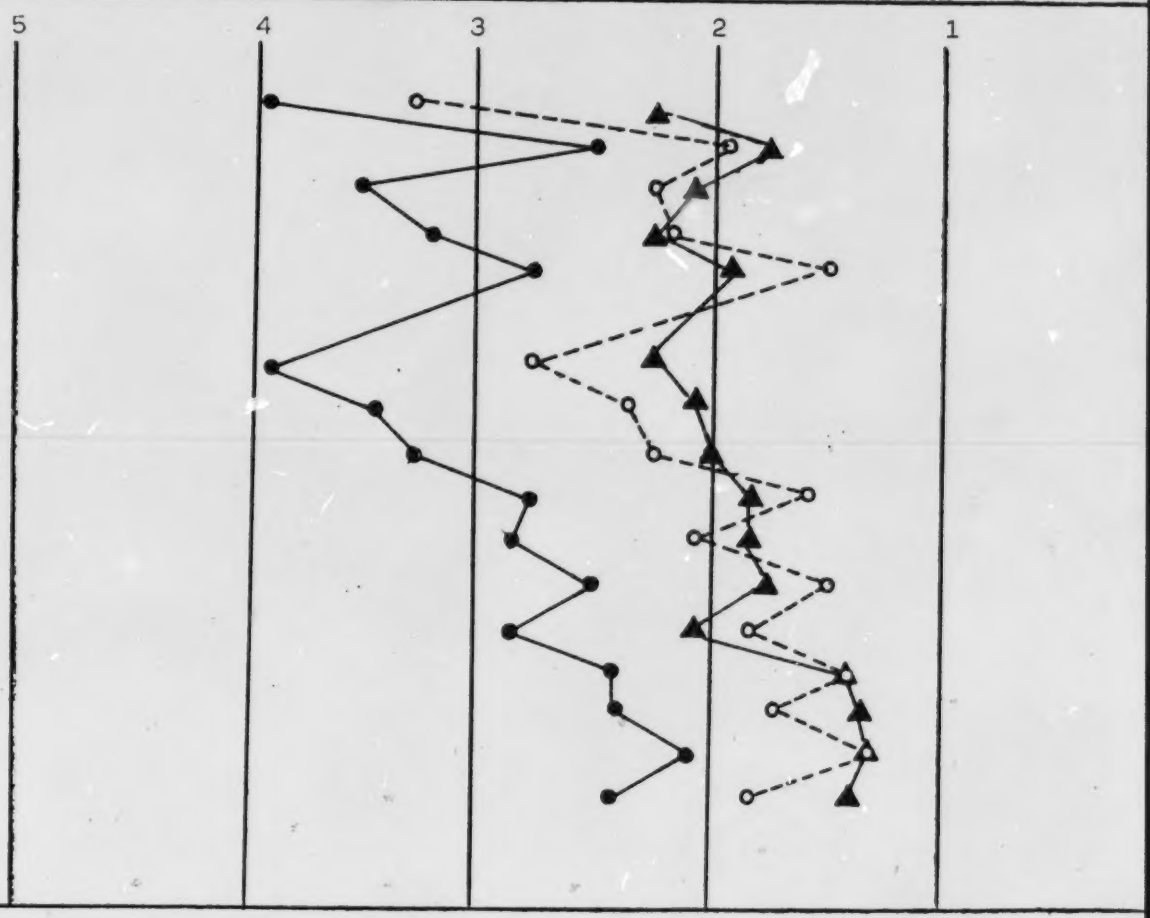
*1. Professors in Professional Area
2. Graphics Professors
3. Administrators

** Design topics in capitals; Production topics in lower case

Fig. 14: Comparison of educators' views of the graphics needs of advertising students

ADVERTISING: PREPARATION

Mean Ratings 1*	2	3	
			Cognitive:
3.9	2.3	3.3	DESIGN PRINCIPLES**
2.5	1.7	1.9	New Technology
3.5	2.1	2.3	Printing Processes
3.2	2.3	2.2	Composition
2.7	1.9	1.5	Paper, Binding
			Skills:
3.9	2.3	2.7	DUMMYING
3.4	2.1	2.4	SCALING, CROPPING
3.3	2.0	2.3	SPECIFYING TYPE
2.7	1.8	1.6	SPECIFYING PHOTOMECHANICS
2.8	1.8	2.1	PREPARING COMPS
2.5	1.7	1.5	LETTERSPACING
2.8	2.1	1.8	Camera-ready asteup
2.4	1.5	1.5	Page Imposition
2.4	1.4	1.7	Second Color Overlay
2.1	1.3	1.3	Bid Specifications
2.4	1.4	1.8	Handsetting Display



*1. Professors in Professional Area
2. Graphics Professors
3. Administrators

** Design topics in capitals; Production topics in lower case

Fig. 15: Comparison of educator's views of the graphics preparation of advertising students

ADMINISTRATORS : ADVERTISING PROFESSORS

Skills Importance	4.31*
Skills Preparation	.17
Cognitive Importance	5.41*
Cognitive Preparation	6.16*
Design Importance	5.36*
Design Preparation	6.11*
Production Importance	5.52*
Production Preparation	6.00*

* Significant at .05

Fig. 16: T values for comparison of administrators and advertising professors

In all areas except one there is significant difference between the views of the administrators and those of the advertising professors. The only agreement is in the preparation of skills which both groups agree is low.

MAGAZINE STUDENTS

The mean ratings presented in Figure 17 are the ratings by the 47 magazine professors who responded to the survey. In this chart the ratings are arrayed in order of their importance as indicated by the respondents.

Importance	ITEM	Preparation
4.7	Dummying	3.7
4.7	Photo Scaling	3.8
4.6	Design Principles	3.5
4.3	Printing Processes	3.4
4.0	Specifying Type	3.3
3.8	Composition	3.2
3.8	Bid Specifications	2.5
3.7	New Technology	2.7
3.6	Page Imposition	2.9
3.6	Paper and Binding	2.8
3.1	Camera-ready Pasteup	2.8
3.6	Photomechanicals	2.6
3.4	Comprehensives	2.3
3.0	Second Color Overlay	2.1
2.3	Letterspacing	2.1
2.3	Handsetting Type	2.0

Fig. 17: Mean ratings for magazine professors

Five of the topics are seen as crucial for magazine students: dummying, photo scaling, design principles, printing processes, and specifying type. Two of the topics are below the level of moderately important: letterspacing and handsetting type. Magazine has far more crucial and very important items than either newspaper or advertising. These five topics are also the five top items in the advertising array. In newspaper specifying type dropped down to sixth and new technology tied for third, so the magazine list does differ slightly from the order of importance for newspaper students.

Students are seen as being very prepared for six of the items and moderately prepared for the remaining items.

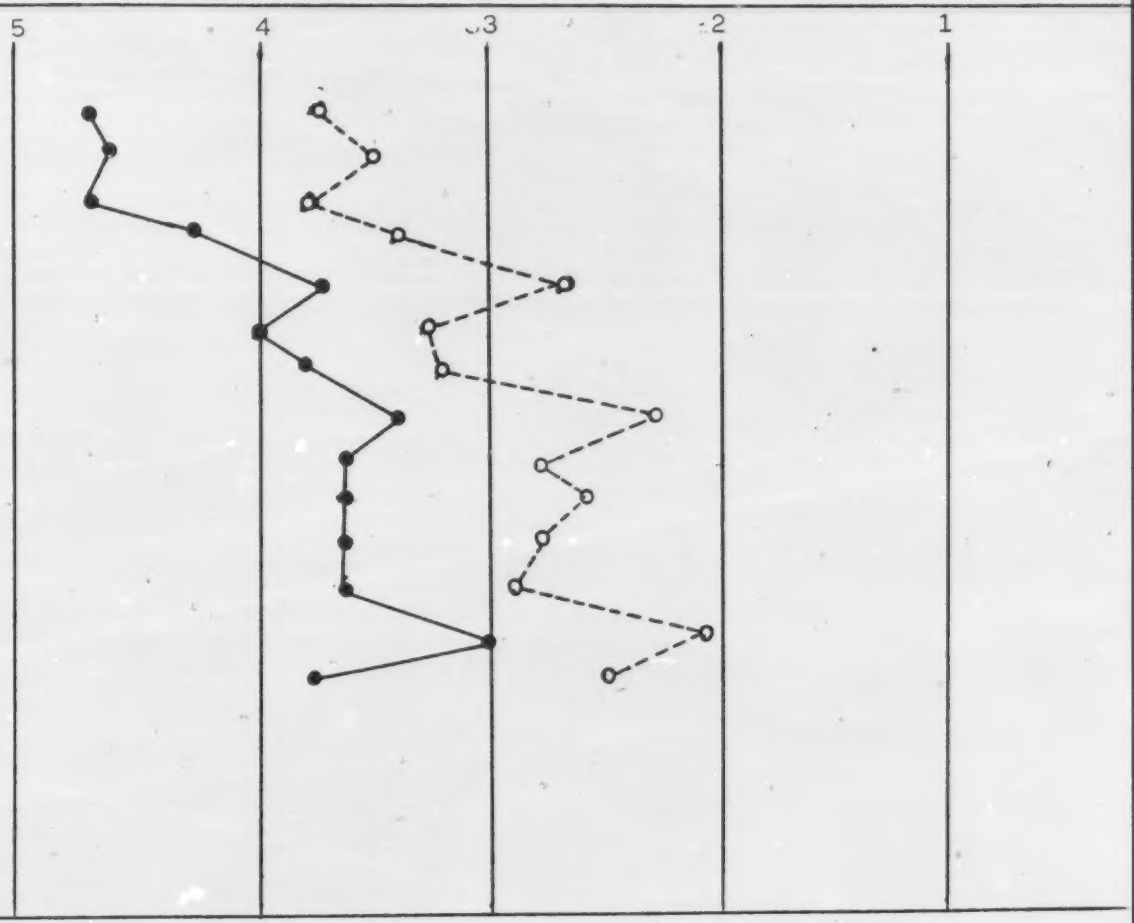
A comparison of the relative position of importance and preparation arrays indicates that only one item varies in ranking and that is bid specifications. That item is sixth in importance and drops down to tenth in preparation. This would suggest that the subject of bid specifications might need more emphasis in the curriculum than it presently gets.

Comparison of Dimension. Figure 18 displays the ratings for those items that are seen to be at least moderate in importance. As mentioned, two of the items are below that level. The two profiles for importance and preparation are farther apart than were the profiles for advertising. Composition is the only topic where the two dimensions of importance and preparation are even close to meeting.

A comparison of the means for the various groupings of scores indicates that, like advertising and news, importance is higher than preparation, design is higher than production and cognitive is higher than skills.

MAGAZINE

Mean Ratings 1*	2	
4.7	3.7	Dummying
4.6	3.5	Design Principles
4.7	3.8	Photo Cropping, Scaling
4.3	3.4	Printing Processes
3.7	2.7	New Technology
4.0	3.3	Specifying Type
3.8	3.2	Composition
3.4	2.3	Comprehensives
3.6	2.8	Camera-ready Pasteups
3.6	2.6	Photomechanicals
3.6	2.8	Paper and Binding
3.6	2.9	Page Imposition
3.0	2.1	Second Color Overlay
3.8	2.5	Bid Specifications
		Below 2.5 Mean:
		Setting Display Transfer
		Letterspacing



*1 Importance
2 Preparation

Fig. 18: Comparison of importance and preparation dimension for magazine students

	IMPORTANCE	PREPARATION
Design	3.86	3.05
Production	3.51	2.70
Cognitive	3.85	2.98
Skills	3.45	2.76

Fig. 19: Magazine professors' means for the dimensions

T tests of the various comparisons indicate all but two of the comparisons shows significant difference between the means at .05. The two areas where there wasn't significant difference were both preparation dimensions. The comparison between design and production items and comparison of cognitive and skills areas were both non significant in differences between means.

IMPORTANCE : PREPARATION	
Design	7.81*
Production	7.48*
Cognitive	7.63*
Skills	4.30*

COGNITIVE : SKILLS	
Importance	5.05
Preparation	1.26

DESIGN : PRODUCTION	
Importance	3.97*
Preparation	2.88

* Significant at .05

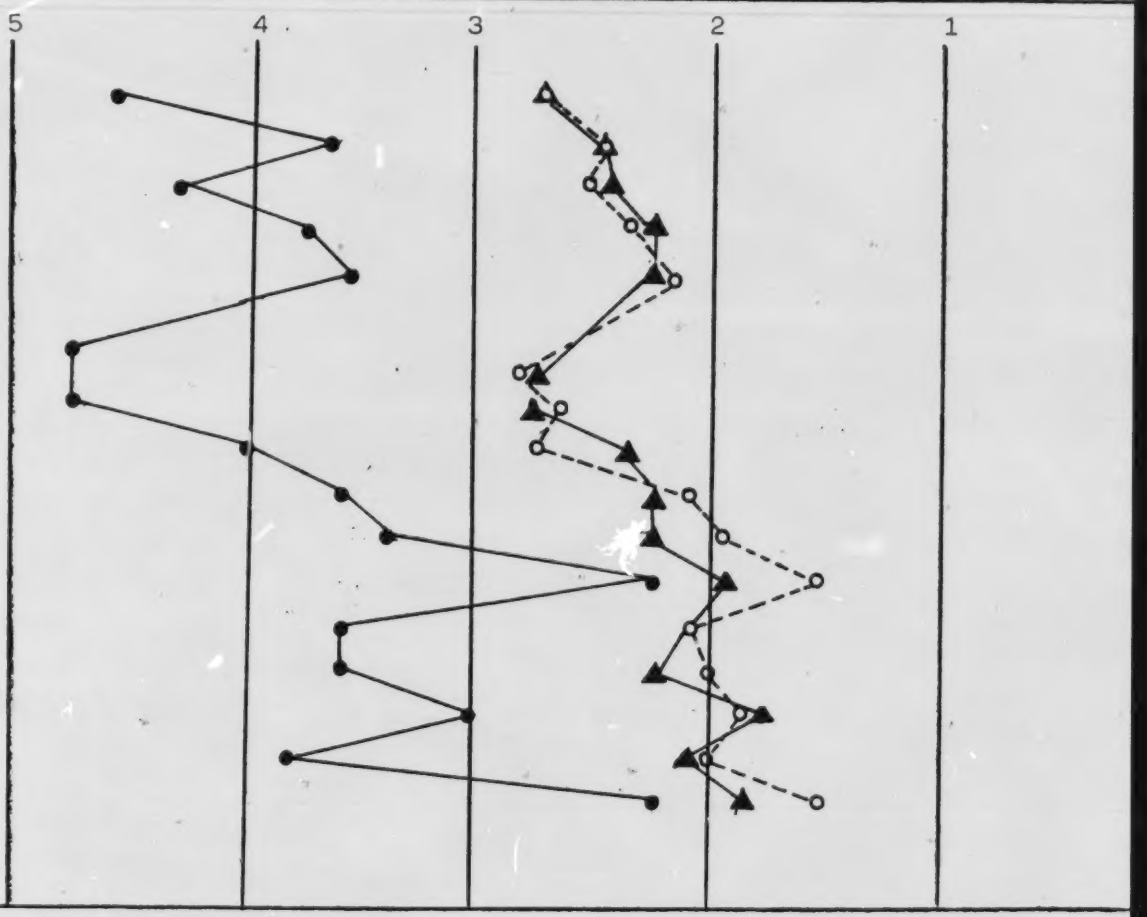
Fig. 20: T values for comparisons of three dimensions

Comparison of Educators. Figures 21 and 22 display the mean ratings for the administrators, graphics professors, and advertising professors. Figure 21 profiles their views of the importance of all the items and Figure 22 is the profile for the views on the preparation dimension.

Obviously the magazine professors' views are much higher than the graphics professors and administrators on both dimensions. There are only two items where the magazine professors are near the ratings of the other two groups in importance and those items are letterspacing and handsetting type. All three groups agree that those two topics are low in importance. The same pattern is true for the preparation dimension. These two charts represent the greatest disimiliarity in views, far greater than either the advertising or news comparisons.

MAGAZINE: IMPORTANCE

Mean Ratings 1*	2	3	
			Cognitive:
4.6	2.7	2.7	DESIGN PRINCIPLES**
3.7	2.4	2.4	New Technology
4.3	2.4	2.5	Printing Processes
3.8	2.3	2.4	Composition
3.6	2.3	2.2	Paper, Binding
			Skills:
4.7	2.7	2.8	DUMMYING
4.7	2.7	2.6	SCALING, CROPPING
4.0	2.4	2.7	SPECIFYING TYPE
3.6	2.3	2.1	SPECIFYING PHOTOMECHANICS
3.4	2.3	1.9	PREPARING COMPS
2.3	1.9	1.5	LETTERSPACING
3.6	2.1	2.1	Camera-ready Pasteup
3.6	2.3	2.0	Page Imposition
3.0	1.7	1.8	Second Color Overlay
3.8	2.1	2.0	Bid Specifications
2.3	1.8	1.5	Handsetting Display



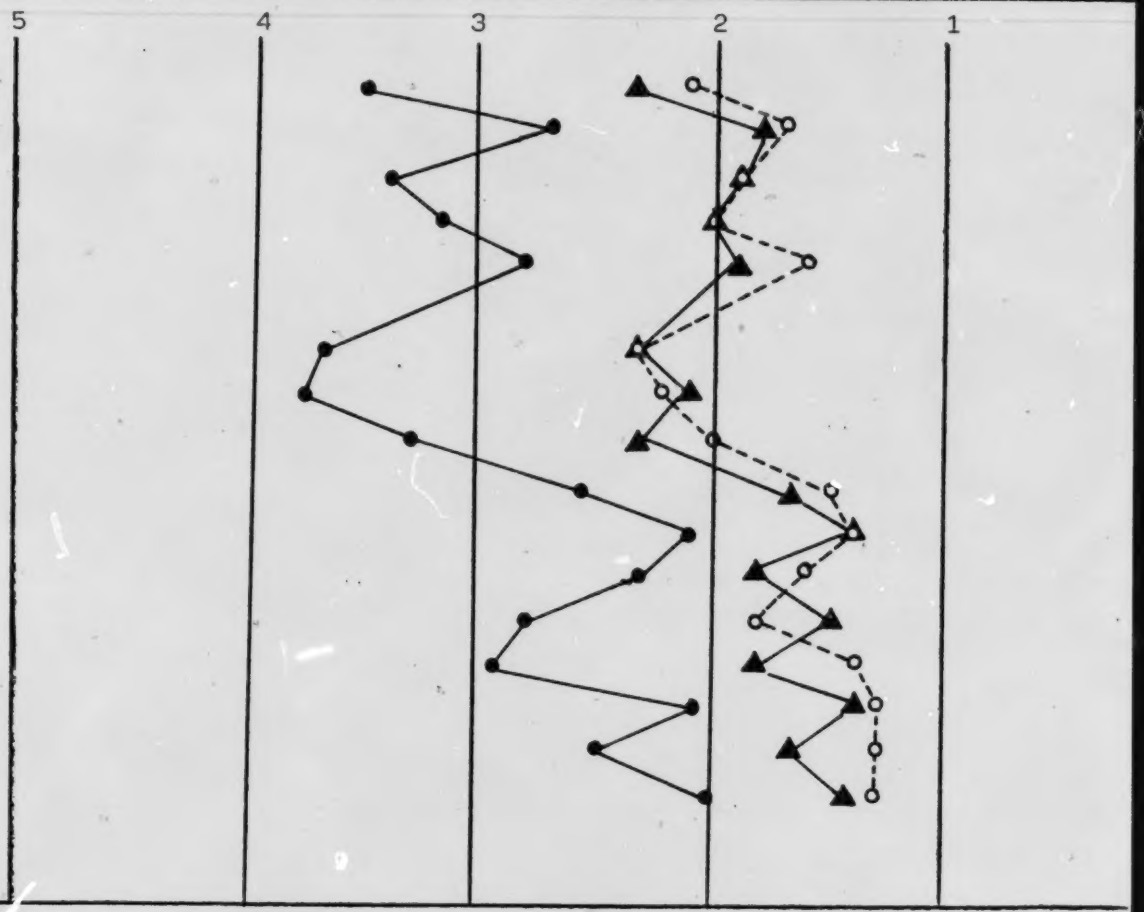
*1. Professors in Professional Area
2. Graphics Professors
3. Administrators

** Design topics in capitals; Production topics in lower case

Fig. 21: Comparison of educator's views of the graphics needs of magazine students

MAGAZINE: PREPARATION

1*	2	3	
			Cognitive:
3.5	2.3	2.1	DESIGN PRINCIPLES**
2.7	1.8	1.7	New Technology
3.4	1.9	1.9	Printing Processes
3.2	2.0	2.0	Composition
2.8	1.9	1.6	Paper, Binding
			Skills:
3.7	2.3	2.3	DUMMYING
3.8	2.1	2.2	SCALING, CROPPING
3.3	2.3	2.0	SPECIFYING TYPE
2.6	1.7	1.5	SPECIFYING PHOTOMECHANICS
2.1	1.4	1.4	PREPARING COMPS
2.3	1.8	1.6	LETTERSPACING
2.8	1.5	1.8	Camera-ready Pasteup
2.9	1.8	1.4	Page Imposition
2.1	1.4	1.3	Second Color Overlay
2.5	1.6	1.3	Bid Specifications
2.0	1.4	1.3	Handsetting Display



*1. Professors in Professional Area
2. Graphics Professors
3. Administrators

** Design topics in capitals; Production topics in lower case

Fig. 22: Comparison of educator's views of graphics preparation of magazine students

T tests were used to test the extent of the difference in means between the magazine professors and the administrators.

ADMINISTRATORS : MAGAZINE PROFESSORS	
Skills Importance	7.91*
Skills Preparation	4.87*
Cognitive Importance	6.94*
Cognitive Preparation	6.10*
Design Importance	8.71*
Design Preparation	19.78*
Production Importance	22.91*
Production Preparation	8.98*

* significant at .05

Fig. 23: T values for comparison of administrators and magazine professors

As suspected from observing the divergent profiles for the means for the two groups, there is significant difference between administrators and magazine professors on all the comparisons across all the dimensions.

PUBLIC RELATIONS

STUDENTS

The mean ratings in Figure 24 are the ratings by the 69 public relations professors who responded to Part II of the survey. The ratings are arrayed in order of their importance as rated by the respondents.

Importance	ITEM	Preparation
4.4	Dummying	3.3
4.3	Design Principles	3.2
4.1	Photo Scaling	3.4
3.8	Printing Processes	3.2
3.7	Bid Specifications	2.2
3.6	Specifying Type	3.1
3.6	New Technology	2.5
3.6	Comprehensives	2.5
3.4	Composition	3.0
3.3	Paper and Binding	2.4
3.2	Camera-ready Pasteups	2.6
3.0	Page Imposition	2.4
3.0	Photomechanicals	2.3
2.6	Second Color Overlay	1.9
2.2	Letterspacing	2.1
2.2	Handsetting Type	2.2

Fig. 24: Mean ratings for public relations

The public relations educators rated three of the items as crucial. These same three items have shown up previously as crucial in the ratings of the other educators. Likewise, the two items on the bottom of the scale were not up to the level of moderately important and that pattern has been seen in previous ratings. Students were rated as very prepared on six of the items and moderately prepared on all but one of the remaining items. They received little preparation in the area of second color overlays.

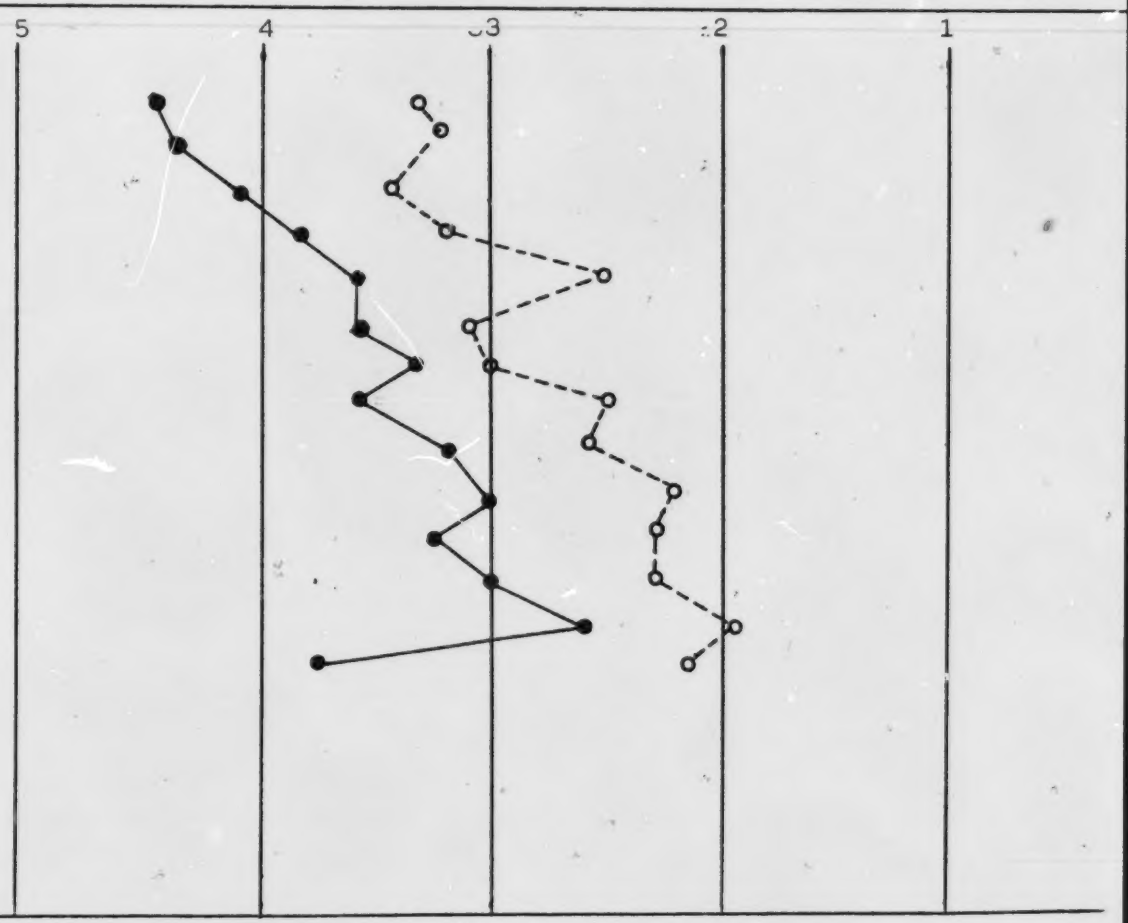
A comparison of the relative position of the importance and preparation arrays indicates that only one item varies in ranking: bid specifications. That item is fifth in importance but twelfth in preparation. This discrepancy suggests that public relations professors feel their students need more experience with this area than they are presently receiving. This same pattern existed for magazine although the difference was not as extreme.

Comparison of Dimensions. Fig. 25 displays the ratings for those items that are seen to be at least moderate in importance. Two of the items, of course, are below that level. The two profiles for importance and preparation are not as extreme as they were for magazine professors, but they are still quite divergent.

A comparison of the means for the various groupings of scores indicates that, like the previous areas, importance is higher than preparation, design is higher than production, and cognitive is higher than skills.

PUBLIC RELATIONS

Mean Ratings 1*	2	
4.4	3.3	Dummying
4.3	3.2	Design Principles
4.1	3.4	Photo Cropping, Scaling
3.8	3.2	Printing Processes
3.6	2.5	New Technology
3.6	3.1	Specifying Type
3.4	3.0	Composition
3.6	2.5	Comprehensives
3.2	2.6	Camera-ready Pasteups
3.0	2.3	Photomechanicals
3.3	2.4	Paper and Binding
3.0	2.4	Page Imposition
2.6	1.9	Second Color Overlay
8.7	2.2	Bid Specifications
		Below 2.5 Mean:
		Setting Display Transfer
		Letterspacing



*1 Importance
2 Preparation

Fig. 25: Comoparison of importance and preparation dimensions for public relations students

	IMPORTANCE	PREPARATION
Design	3.58	2.82
Production	3.18	2.45
Cognitive	3.46	2.72
Skills	3.35	2.48

Fig. 26: Public relations professors' means for the dimensions

T tests on the various comparisons indicate all but one of the comparisons shows a significant difference between the means at the .05 level. The one area where there wasn't a significant difference was the comparison between cognitive knowledge and skills on the dimension of importance.

IMPORTANCE :	PREPARATION
Design	8.32*
Production	9.26*
Cognitive	7.71*
Skills	10.12*
COGNITIVE :	**SKILLS**
Importance	1.33
Preparation	5.00*
DESIGN :	**PREPARATION**
Importance	4.54*
Preparation	4.22*

* significant at .05

Fig. 27: T Values for comparisons of three dimensions

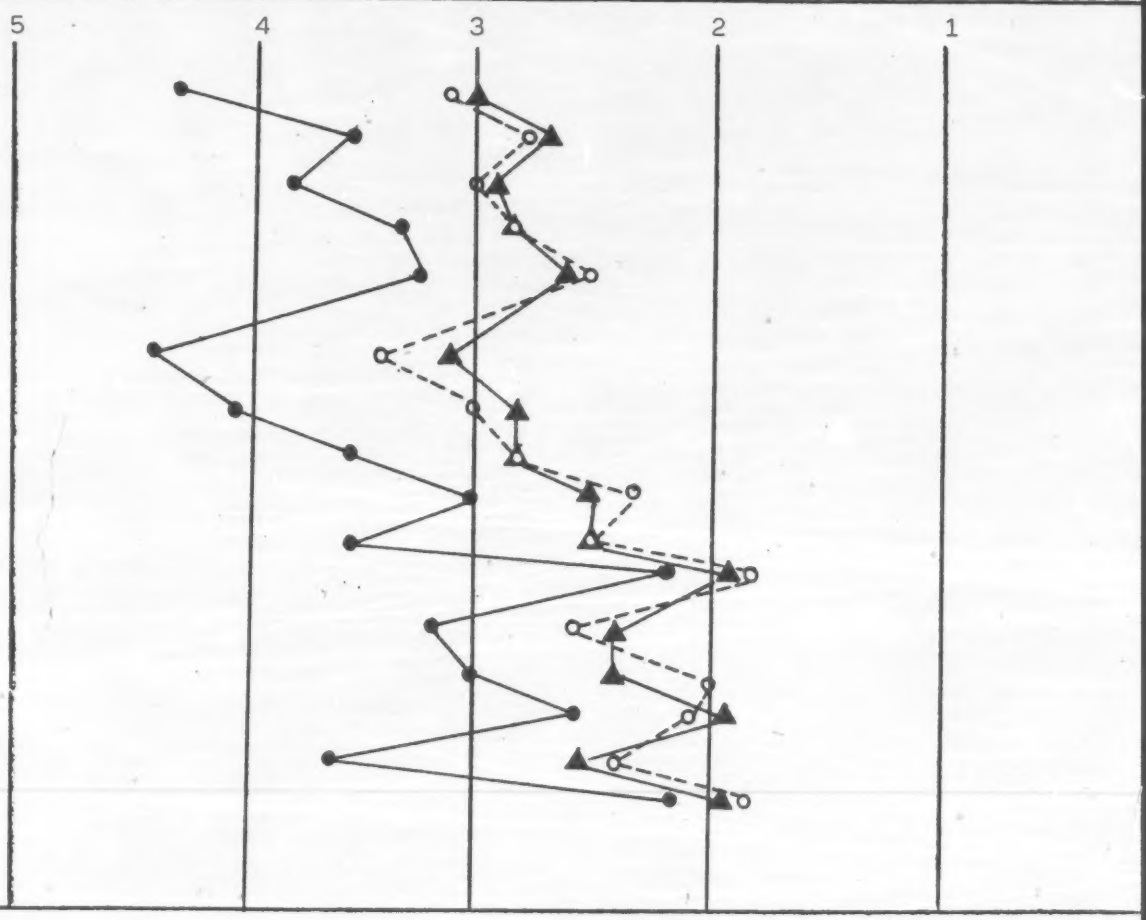
Comparison of Educators. Fig. 28 and 29 display the mean ratings for the administrators, graphics professors, and public relations professors. Figure 28 is for the importance dimension and Figure 29 shows the ratings for the preparation dimension.

Once again there is virtual agreement between the graphics professors and the administrators while the public relations professors are rating the items considerably higher. On the importance dimension there is some agreement among all three groups of educators regarding the relatively low value of letterspacing and handsetting display type. The public relations professor are the furthest from the other two groups on the items of dummying, photo scaling, comprehensives, bid specifications, and design principles.

The three groups are generally much closer in their ratings on the preparation dimension. The graphics professors have an unusual profile on this dimension--much flatter than on previous ratings. It's as if the graphics professors feel that the public relations students are uniformly unprepared.

PUBLIC RELATIONS: IMPORTANCE

Mean Ratings 1*	2	3	
			Cognitive:
4.3	3.0	3.1	DESIGN PRINCIPLES**
3.6	2.7	2.8	New Technology
3.8	2.9	3.0	Printing Processes
3.4	2.8	2.8	Composition
3.3	2.6	2.5	Paper, Binding
			Skills:
4.4	3.1	3.4	DUMMYING
4.1	2.8	3.0	SCALING, CROPPING
3.6	2.8	2.8	SPECIFYING TYPE
3.0	2.5	2.3	SPECIFYING PHOTOMECHANICS
3.6	2.5	2.5	PREPARING COMPS
2.2	1.9	1.8	LETTERSPACING
3.2	2.4	2.6	Camera-ready Pasteup
3.0	2.4	2.0	Page Imposition
2.6	1.9	2.1	Second Color Overlay
3.7	2.6	2.4	Bid Specifications
2.2	1.9	1.8	Handsetting Display



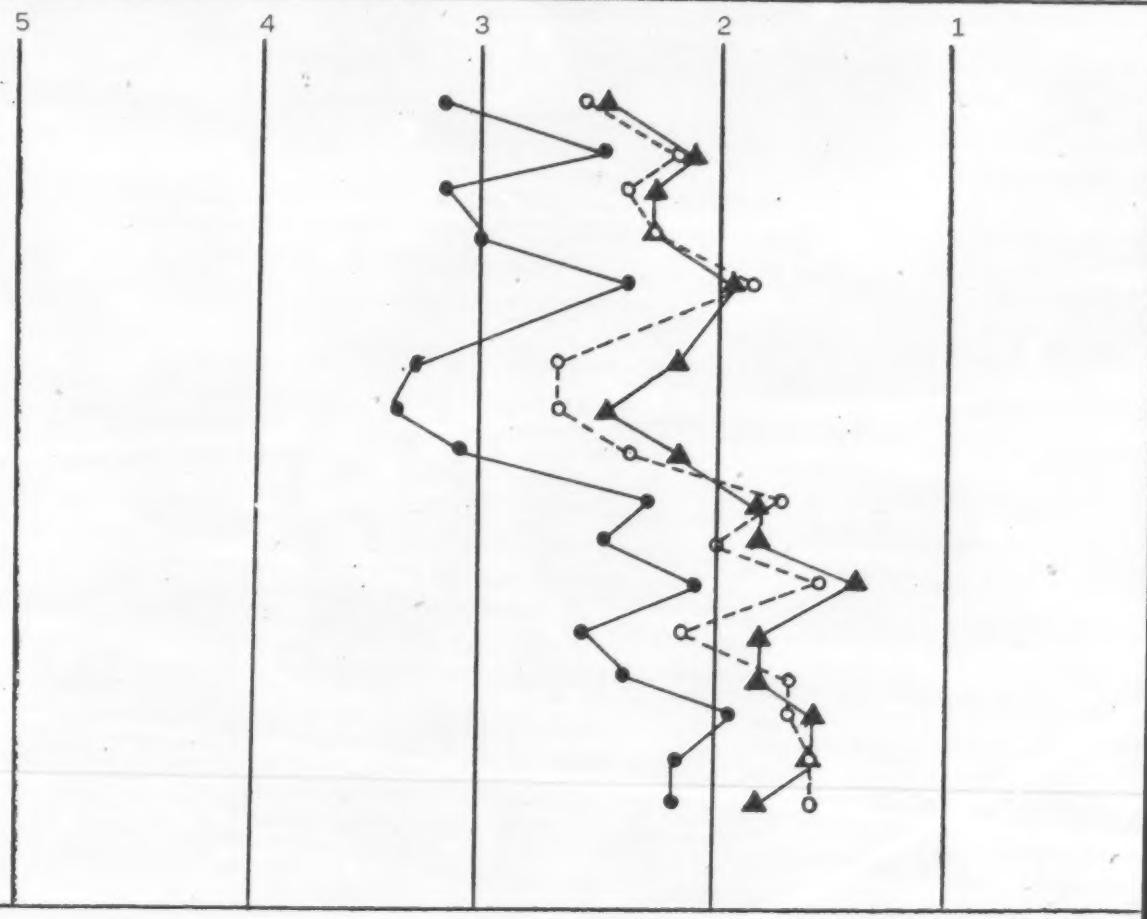
*1. Professors in Professional Area
2. Graphics Professors
3. Administrators

** Design topics in capitals; Production topics in lower case

Fig. 28: Comparison of educator's views of the graphics needs of public relations students

PUBLIC RELATIONS: PREPARATION

Mean Ratings 1*	2	3	
			Cognitive:
.2	2.5	2.6	DESIGN PRINCIPLES**
.5	2.1	2.2	New Technology
.2	2.3	2.4	Printing Processes
.0	2.3	2.3	Composition
.4	1.9	1.8	Paper, Binding
			Skills:
.3	2.3	2.7	DUMMYING
.4	2.5	2.7	SCALING, CROPPING
.1	2.2	2.4	SPECIFYING TYPE
.3	1.8	1.7	SPECIFYING PHOTOMECHANICS
.5	1.8	2.0	PREPARING COMPS
.1	1.4	1.6	LETTERSPACING
.6	1.8	2.2	Camera-ready Pasteup
.4	1.8	1.7	Page Imposition
1.9	1.6	1.7	Second Color Overlay
.2	1.6	1.6	Bid Specifications
.2	1.8	1.6	Handsetting Display



*1. Professors in Professional Area
2. Graphics Professors
3. Administrators

** Design topics in capitals; Production topics in lower case

Fig. 29:Comparison of educator's views of the graphics preparation of public relations students

T tests were used to test the extent of the difference in means between the administrators and the public relations professors in all the comparisons except one: the preparation of skills.

ADMINISTRATORS : PUBLIC RELATIONS PROFESSORS	
Skills Importance	5.70*
Skills Preparation	2.38*
Cognitive Importance	3.58*
Cognitive Preparation	3.74*
Design Importance	5.56*
Design Preparation	4.06*
Production Importance	5.04*
Production Preparation	2.95*

* Significant difference at .05

Fig. 30: T values for comparison of administrators and public relations professors

PHOTOJOURNALISM

The mean ratings in Figure 31 are the ratings by the 39 photojournalism professors who responded to the survey. Their ratings are arrayed in order of importance.

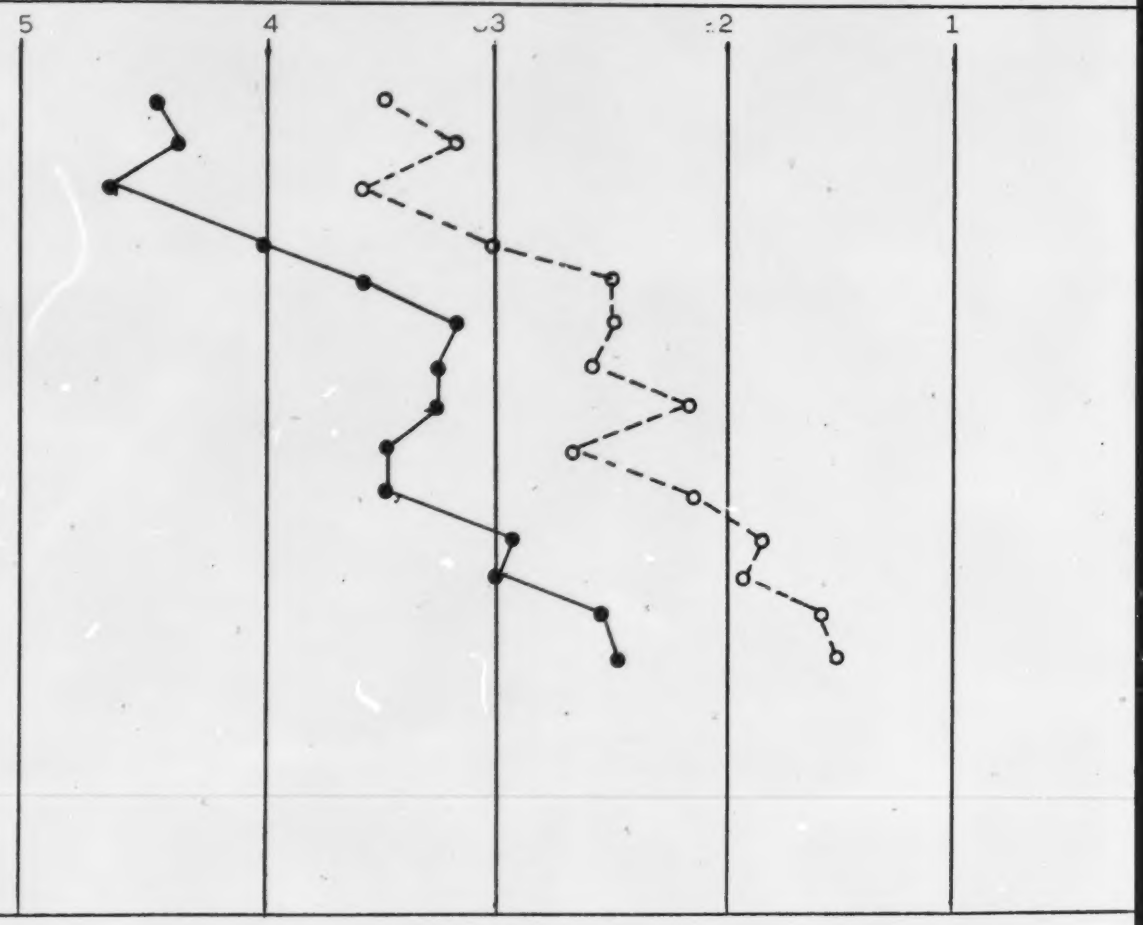
	Importance	ITEM	Preparation
1	4.7	Photo scaling	3.6
2	4.4	Dummying	3.5
3	4.3	Design Principles	3.2
4	4.0	Printing Processes	3.0
5	3.6	New Technology	2.5
6	3.5	Camera-Ready Pasteup	2.7
7	3.5	Photomechanicals	2.2
8	3.3	Composition	2.6
9	3.2	Specifying Type	2.5
10	3.2	Comprehensives	2.2
11	3.0	Page Imposition	1.9
12	2.9	Paper and binding	1.8
13	2.6	Second color overlay	1.6
14	2.5	Bid specifications	1.5
15	2.3	Letterspacing	1.9
16	2.3	Handsetting Type	1.9

Fig. 31: Mean ratings for photojournalism

For the first time dummying is not in the number one spot. For photojournalists, the top item is photo scaling. The photojournalism professors rated four of the items as crucial and two as below moderate importance. Photomechanicals was rated fifth, the first time that item has been ranked so high, but it would be eighth in preparation. This is another area where the emphasis in preparation seems to diverge from the item's importance. Students were rated as very prepared on four of the items but six of the items received a rating of little prepared.

Comparison of Dimensions. Fig. 32 displays the ratings for those items that are seen to be at least moderate in importance. As usual there is considerable distance between the profiles for importance and preparation with importance being obviously higher in ratings. As in the previous areas, a comparison of means for the various groups of scores indicates that importance is higher than preparation, design is higher than production, and cognitive knowledge is higher than skills.

Mean Ratings 1*	2	
4.4	3.5	Dummying
4.3	3.2	Design Principles
4.7	3.6	Photo Cropping, Scaling
4.0	3.0	Printing Processes
3.6	2.5	New Technology
3.2	2.5	Specifying Type
3.3	2.6	Composition
3.2	2.2	Comprehensives
3.5	2.7	Camera-ready Pasteups
3.5	2.2	Photomechanicals
2.9	1.8	Paper and Binding
3.0	1.9	Page Imposition
2.6	1.6	Second Color Overlay
2.5	1.5	Bid Specifications
		Below 2.5 Mean:
		Setting Display Transfer
		Letterspacing



*1 Importance
2 Preparation

Fig. 32: Comparison of importance and preparation dimension for photojournalism students

	IMPORTANCE	PREPARATION
Design	3.61	2.68
Production	3.05	2.15
Cognitive	3.39	2.44
Skills	3.32	1.64

Fig. 33: Means for dimensions as rated by photojournalism professors

T tests of the comparisons indicate all of them are significantly different at the .05 level.

IMPORTANCE : PREPARATION	
Design	8.74*
Production	7.81*
Cognitive	7.83*
Skills	9.45*
COGNITIVE : SKILLS	
Importance :	7.05*
Preparation	4.27*
DESIGN : PRODUCTION	
Importance :	6.05*
Preparation :	4.18*

Fig. 34: T values for the comparisons of the three dimensions

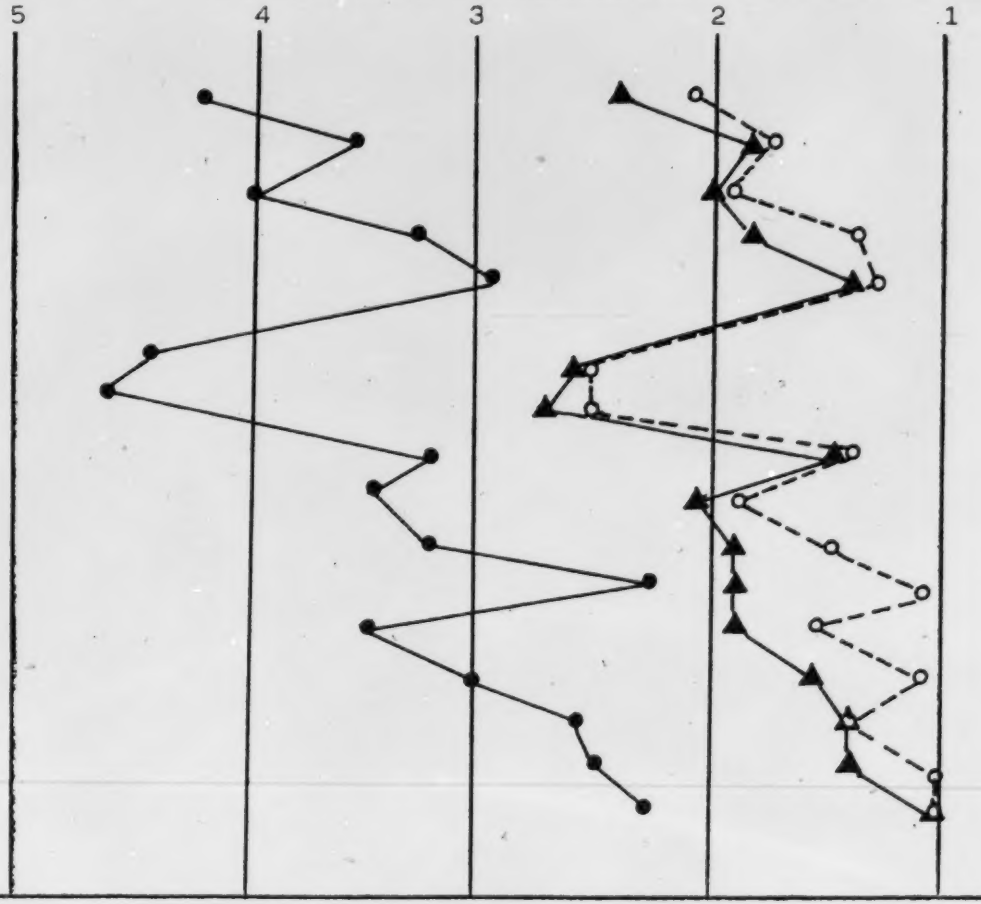
Comparison of Educators. Figure 35 and Figure 36 display the mean ratings for the administrators, graphics professors, and public relations professors. Figure 35 is for the importance dimension and Figure 36 shows the ratings for the preparation dimension.

Once again there is virtual agreement between the graphics professors and the administrators while the public relations professors are rating the items considerably higher. There is more disagreement between the administrators and the graphics professors on the importance dimension than on the preparation dimension. On the importance dimension, the greatest difference between photojournalism professors and the other two groups occurs for the items dummying, specifying type, paste-ups, and design principles. There are no items that could be considered close on the importance dimension but there are several with some general agreement on the preparation dimension: photomechanicals, overlays, bid specifications, and paper and binding.

T tests were used to test the extent of the difference in means between the photojournalism professors and the administrators. All but one of the tests indicated significant differences between the two.

PHOTOJOURNALISM: IMPORTANCE

Mean Ratings 1*	2	3	
			Cognitive:
4.3	2.4	2.1	DESIGN PRINCIPLES**
3.6	1.8	1.7	New Technology
4.0	2.0	1.9	Printing Processes
3.3	1.8	1.4	Composition
2.9	1.4	1.3	Paper, Binding
			Skills:
4.4	2.6	2.5	DUMMYING
4.7	2.7	2.5	SCALING, CROPPING
3.2	1.5	1.4	SPECIFYING TYPE
3.5	2.1	1.9	SPECIFYING PHOTOMECHANICS
3.2	1.9	1.5	PREPARING COMPS
2.3	1.9	1.0	LETTERSPACING
3.5	1.9	1.6	Camera-ready Pasteup
3.0	1.6	1.1	Page Imposition
2.6	1.4	1.4	Second Color Overlay
2.5	1.4	1.0	Bid Specifications
2.3	1.1	1.0	Handsetting Display



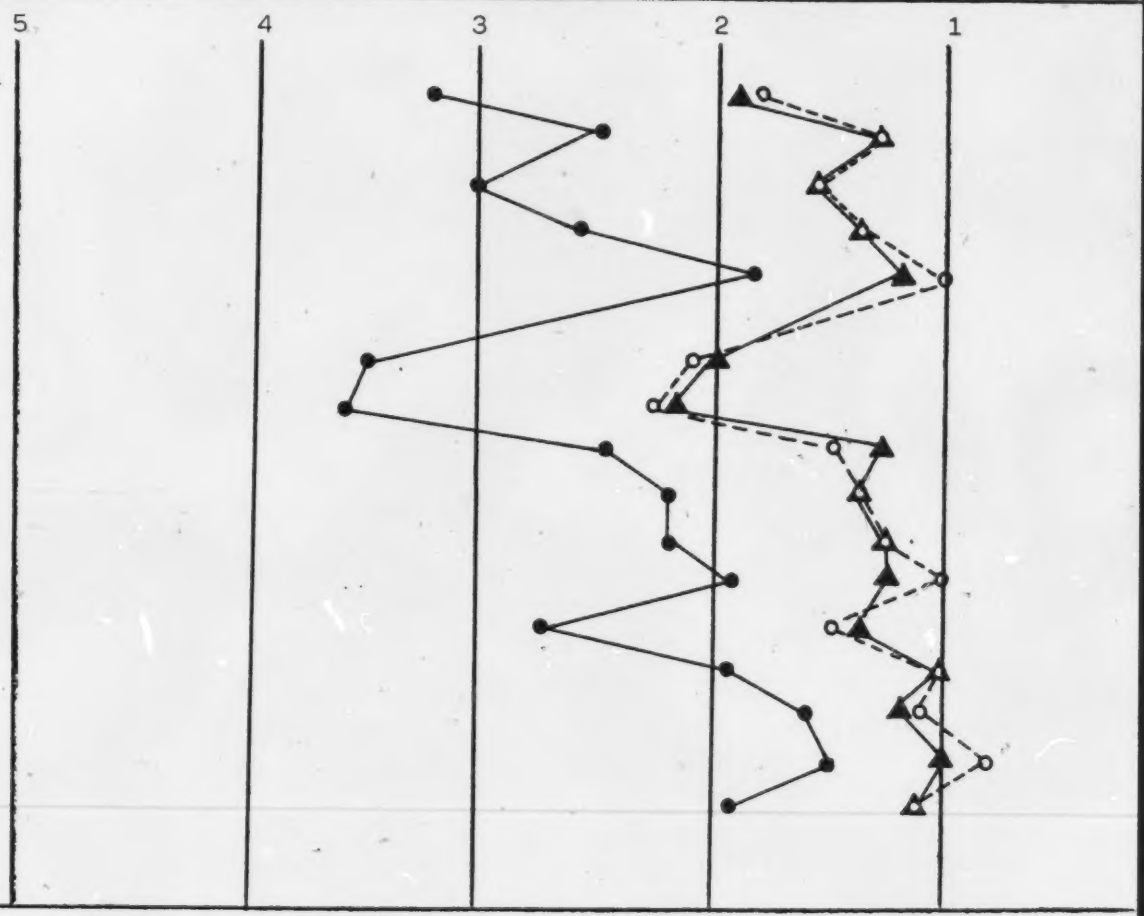
*1. Professors in Professional Area
2. Graphics Professors
3. Administrators

** Design topics in capitals; Production topics in lower case

Fig. 35: Comparison of educator's views of the graphics needs of photojournalism students

PHOTOJOURNALISM: PREPARATION

Mean Ratings 1*	2	3	
			Cognitive:
3.2	1.9	1.8	DESIGN PRINCIPLES**
2.5	1.3	1.3	New Technology
3.0	1.6	1.6	Printing Processes
2.6	1.4	1.4	Composition
1.8	1.2	1.0	Paper, Binding
			Skills:
3.5	2.0	2.1	DUMMYING
3.6	2.2	2.3	SCALING, CROPPING
2.5	1.3	1.5	SPECIFYING TYPE
2.2	1.4	1.4	SPECIFYING PHOTOMECHANICS
2.2	1.3	1.3	PREPARING COMPS
1.9	1.3	1.0	LETTERSPACING
2.7	1.4	1.5	Camera-ready Pasteup
1.9	1.0	1.0	Page Imposition
1.6	1.2	1.1	Second Color Overlay
1.5	1.0	.8	Bid Specifications
1.9	1.1	1.1	Handsetting Display



*1. Professors in Professional Area
2. Graphics Professors
3. Administrators

** Design topics in capitals; Production topics in lower case

Fig. 36: Comparison of educator's views of the graphics preparation of photojournalism student

ADMINISTRATORS / PHOTOJOURNALISM PROFESSORS

Skills Importance	10.87*
Skills Preparation	1.10
Cognitive Importance	3.53*
Cognitive Preparation	3.74*
Design Importance	5.56*
Design Preparation	4.06*
Production Importance	5.04*
Production Preparation	2.95*

* significant at .05

Fig. 37 T values for comparison of administrators and photojournalism professors

SUMMARY

Importance. The same three items consitently showed up at the top of array in all professional areas: dummying, cropping and scaling photos, and design principles. In addition, new technology was seen as crucial for students in newspaper; and printing processes were crucial in magazine and photojournalism.

Two items consistently were at the bottom of the list of importance across all five areas: letterspacing and handsetting type. Bid specifications also fell below the moderately important line for news students.

Preparation. The three items at the top of the importance scale also were top of the preparation scale and they were rated in the "very prepared" category. Magazine professors also saw their students as very prepared in composition and printing processes; photojournalism also rated their students high in printing processes.

The two typography items consistently rated low in importance were also rated low in preparation. Some of the other items which were below 2.5 were: second color overlay for all five professional areas; comprehensives for advertising, and magazine; photomechanics for advertising and public relations; page imposition for photojournalism and public relations; and paper and binding for photojournalism. These last items are important because these are the ones that are above the 2.5 point in importance but fall below that point in preparation. In other words they are seen as being at least moderate in importance but students are not being prepared to that level--in many cases the preparation is little or none.

Order. In the middle of the lists there is naturally some changing of position for the items. The only analysis made of this was to check for items which were rated relatively higher by several points on either importance or preparation within the array. This would indicate an item that was either

over or underrated in importance. In all cases the major difference was a higher score in importance and a lower one in preparation. This occurred in advertising and news, bid specifications for magazine and public relations; and photomechanicals for photojournalism. These items were divergent with the importance rating much higher within the array than the preparation rating.

Dimensions. There are some very general conclusions that are easy to make for the three basic comparisons. Importance was significantly higher than preparation for all the areas; cognitive was significantly higher than production.

Administrators and Professors. Generally the graphics professors and the administrators agreed on the ratings of both importance and preparation for all the professional areas. But there was a clear distinction between the ratings of those two groups and the professors who taught in those professional areas. In all cases there was significant difference between them. Magazine showed the greatest amount of difference, followed by photojournalism.

FURTHER RESEARCH

There is one other obvious step that needs to be taken with this study. It would be very useful to survey professionals working in the various areas to see how their views of graphics needs for their own jobs compare with the views of the three types of educators involved in this series of surveys.

IMPORTANCE					TOPIC	PREPARATION				
News n=198	Adv. n=44	Mag. n=47	PR n=69	PJ n=38		News n=198	Adv. n=44	Mag. n=47	PR n=69	PJ n=38
					-Skills-					
4.3	4.5	4.7	4.4	4.4	Dummying	3.5	3.9	3.7	3.3	3.5
4.1	3.7	4.7	4.1	4.7	Photo Scaling	3.4	3.4	3.8	3.4	3.6
3.7	3.6	4.0	3.6	3.2	Specifying Type	3.1	3.3	3.3	3.1	2.5
2.8	3.2	3.4	3.6	3.2	Comprehensives	2.3	2.8	2.3	2.5	2.2
3.4	3.3	3.6	3.2	3.5	Camera-ready Pasteup	2.8	2.8	2.8	2.6	2.7
2.2	3.0	3.8	3.7	2.5	Bid Specifications	1.6	2.1	2.5	2.2	1.5
2.9	3.2	3.6	3.0	3.5	Photomechanicals	2.2	2.7	2.6	2.3	2.2
2.6	2.9	3.6	3.0	3.0	Page Imposition	2.0	2.4	2.9	2.4	1.9
2.5	3.0	3.0	2.6	2.6	Second Color Overlay	1.7	2.4	2.1	1.9	1.6
2.2	2.5	2.3	2.2	2.3	Letterspacing	1.9	2.5	2.1	2.1	1.9
2.1	2.3	2.3	2.2	2.3	Handsetting Type	1.9	2.4	2.0	2.2	1.9
3.0	3.2	3.5	3.2	3.2	Professional Area Mean	2.4	2.7	2.7	2.6	2.3
					-Cognitive-					
4.0	4.5	4.6	4.3	4.3	Design Principles	3.0	3.9	3.5	3.2	3.2
3.8	3.8	4.3	3.8	4.0	Printing Processes	3.2	3.5	3.4	3.2	3.0
4.0	3.6	3.7	3.6	3.6	New Technology	2.8	2.5	2.7	2.5	2.5
3.6	3.6	3.8	3.4	3.3	Composition	3.0	3.2	3.0	3.2	2.6
2.8	3.1	3.6	3.3	2.9	Paper and Binding	2.2	2.7	2.8	2.4	1.8
3.6	3.7	4.0	3.7	3.6	Professsional Area Mean	2.8	3.2	3.1	2.9	2.6

*Combined responses of administrators and graphics instructors

Fig. 38: Summary of means for all areas and dimensions